

Patent Abstracts of Japan

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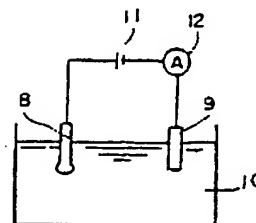
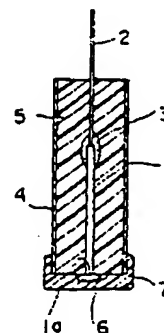
APPLICATION DATE : 24-07-87  
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TITLE : ENZYME SENSOR



ABSTRACT : PURPOSE: To enable measurement of the density of a substrate quickly, by covering the surface of an electrode directly with an enzyme immobilized layer to measure a value of current flowing with the oxidation of hydrogen peroxide formed in the layer.

CONSTITUTION: A lead 2 is connected to a terminal of a platinum wire by soldering 3, inserted into a teflon tube 4 and fixed and insulated with an epoxy based adhesive 5 to form a conductive substrate with the section 1a alone of the platinum wire serving as electrode surface. A specified electrolytic liquid is used with a three-electrode cell having the conductive substrate as working pole, a silver/silver chloride electrode as reference pole and the platinum wire as opposed pole to form an electrolytically polymerized film of 1,2- diaminobenzene on the surface 1a of a platinum electrode, glucosidase coexisting in an electrolytic liquid 10 is taken into the film and the platinum electrode is covered with an enzyme immobilized layer. Then, a cellulose acetate film 7 is applied on the platinum electrode by dipping to obtain a glucose sensor 8. Hydrogen peroxide formed with an enzyme sensor is oxidized to measure a value of current flowing thereby enabling quick determination of the density of a substrate.

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